PAR 1420.1 – Emission Standards for Lead and Other TACs from Large Lead-Acid Battery Recycling Facilities

January 9, 2015

Rule 1420.1 Background

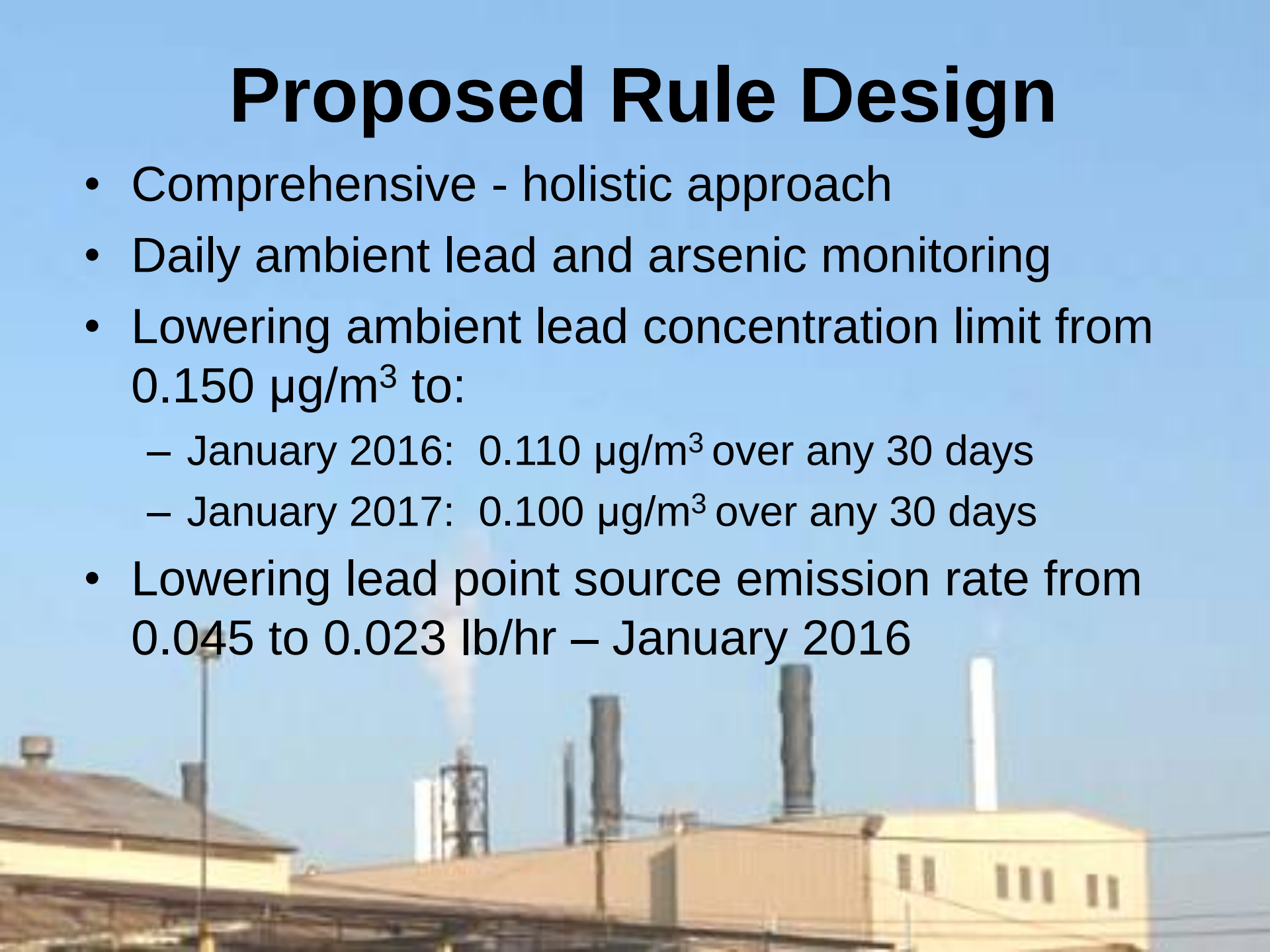
- Adopted November 5, 2010 and amended in January and March 2014
- Applies to large lead-acid battery recycling facilities
  - Exide Technologies, Vernon
  - Quemetco, Industry
- Reduces lead, arsenic, benzene, and 1,3-butadiene emissions
- Limits ambient lead and arsenic
- Comprehensive approach

Proposed Amended Rule 1420.1

- January 2014, Governing Board staff directed staff to:
  - Begin rulemaking to consider lowering the lead point source emission rate; and
  - Possibly other revisions to reduce the further accumulation of lead dust (DTSC findings regarding elevated lead levels in surface dust and soil samples)

Proposed Rule Design

- Comprehensive - holistic approach
- Daily ambient lead and arsenic monitoring
- Lowering ambient lead concentration limit from 0.150 µg/m^3 to:
  - January 2016: 0.110 µg/m^3 over any 30 days
  - January 2017: 0.100 µg/m^3 over any 30 days
- Lowering lead point source emission rate from 0.045 to 0.023 lb/hr – January 2016



Key Issue

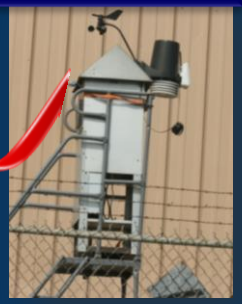
How can lead emissions be best controlled through this rulemaking?

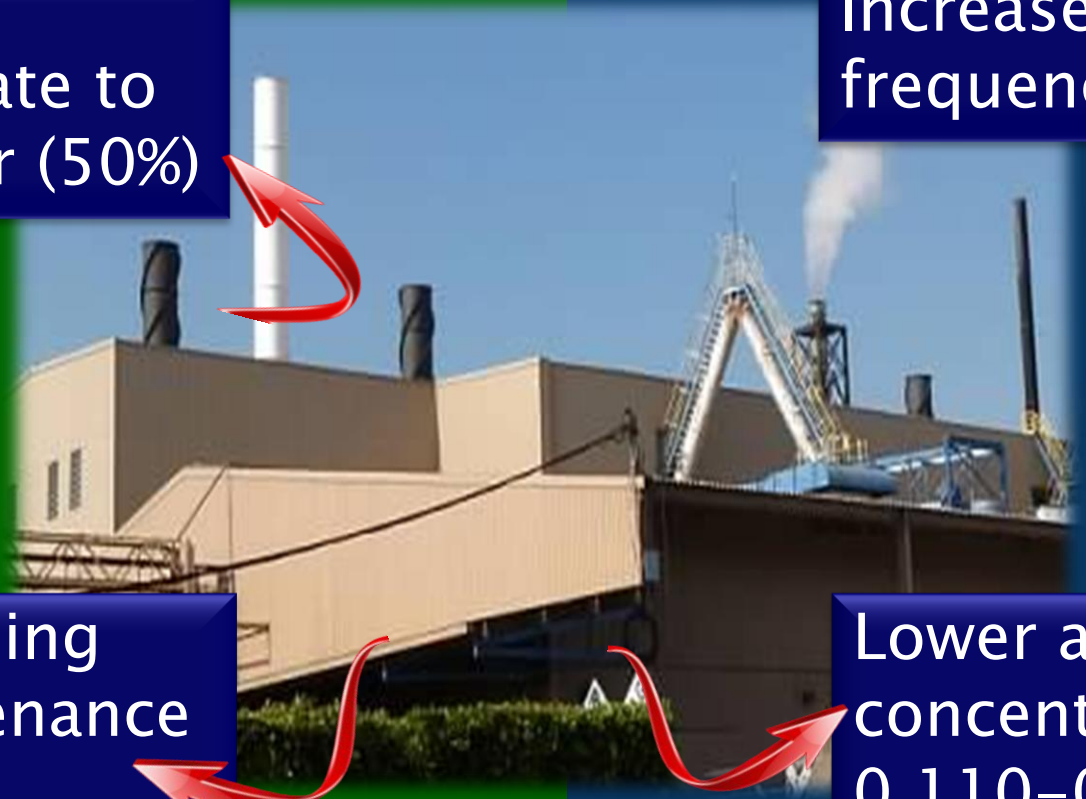
Emission Reductions

Monitoring & Enforcement

Lower Lead emission rate to 0.023 lb/hr (50%)

Increase sampling frequency to daily

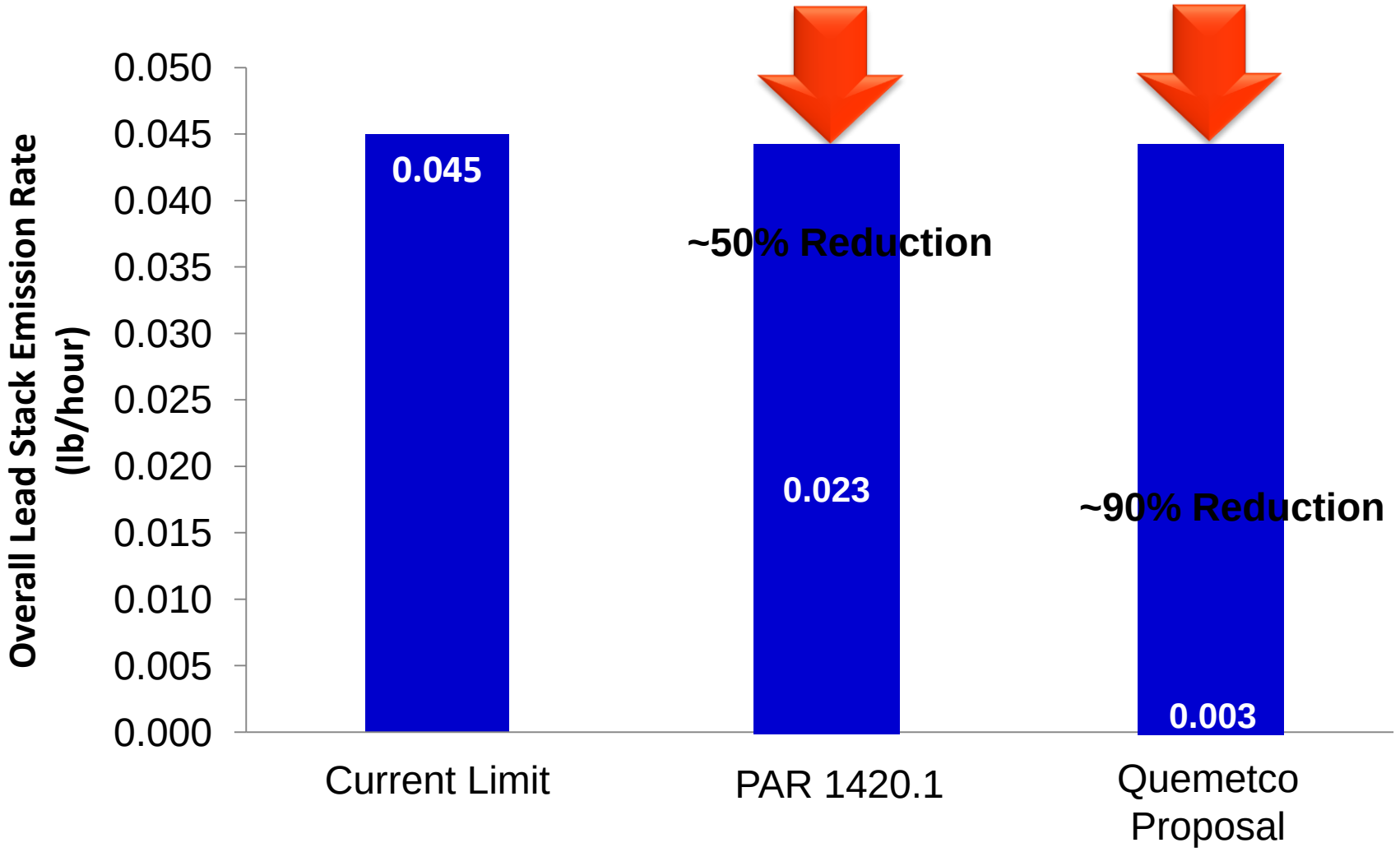




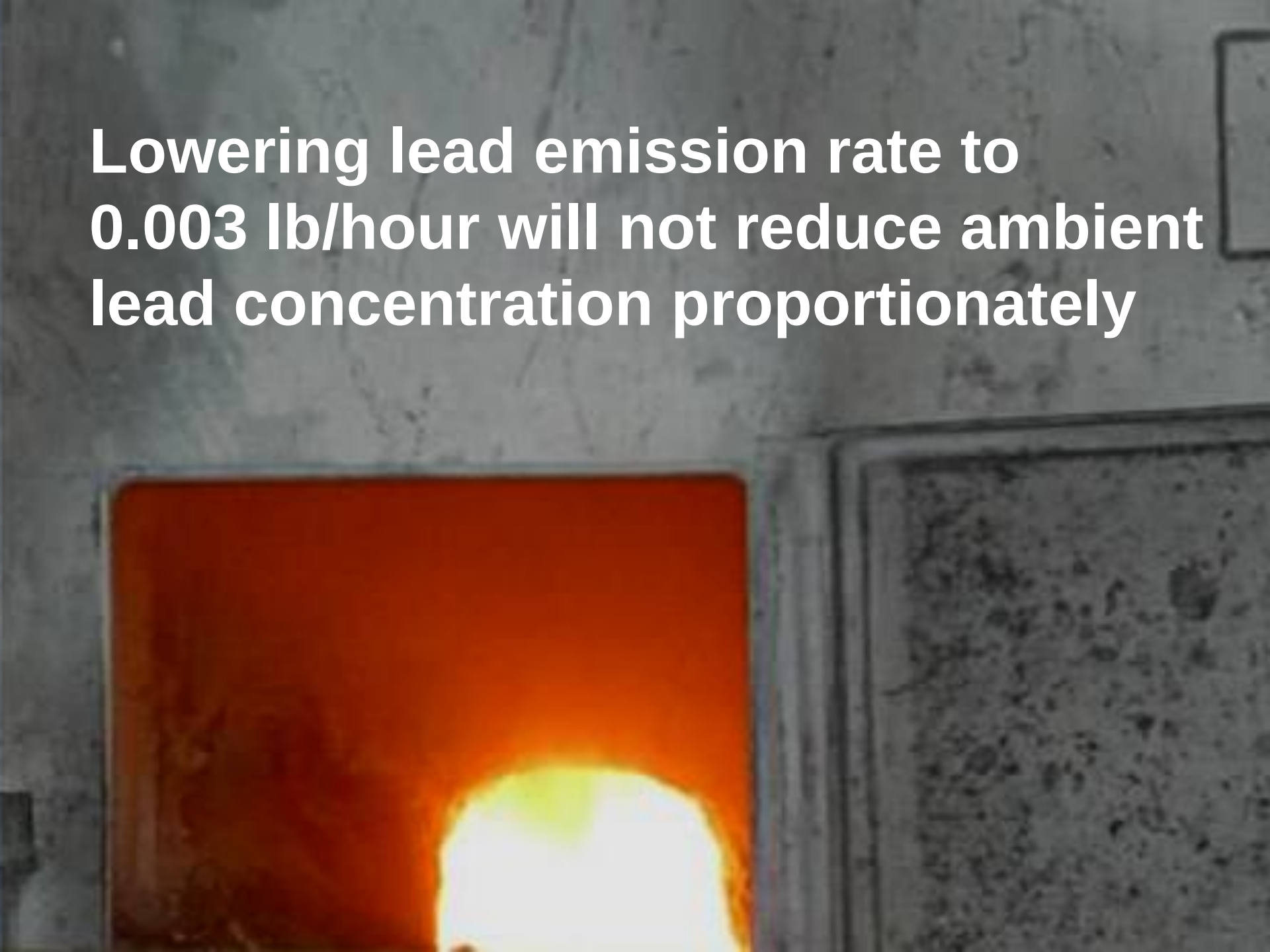
Housekeeping and maintenance provisions

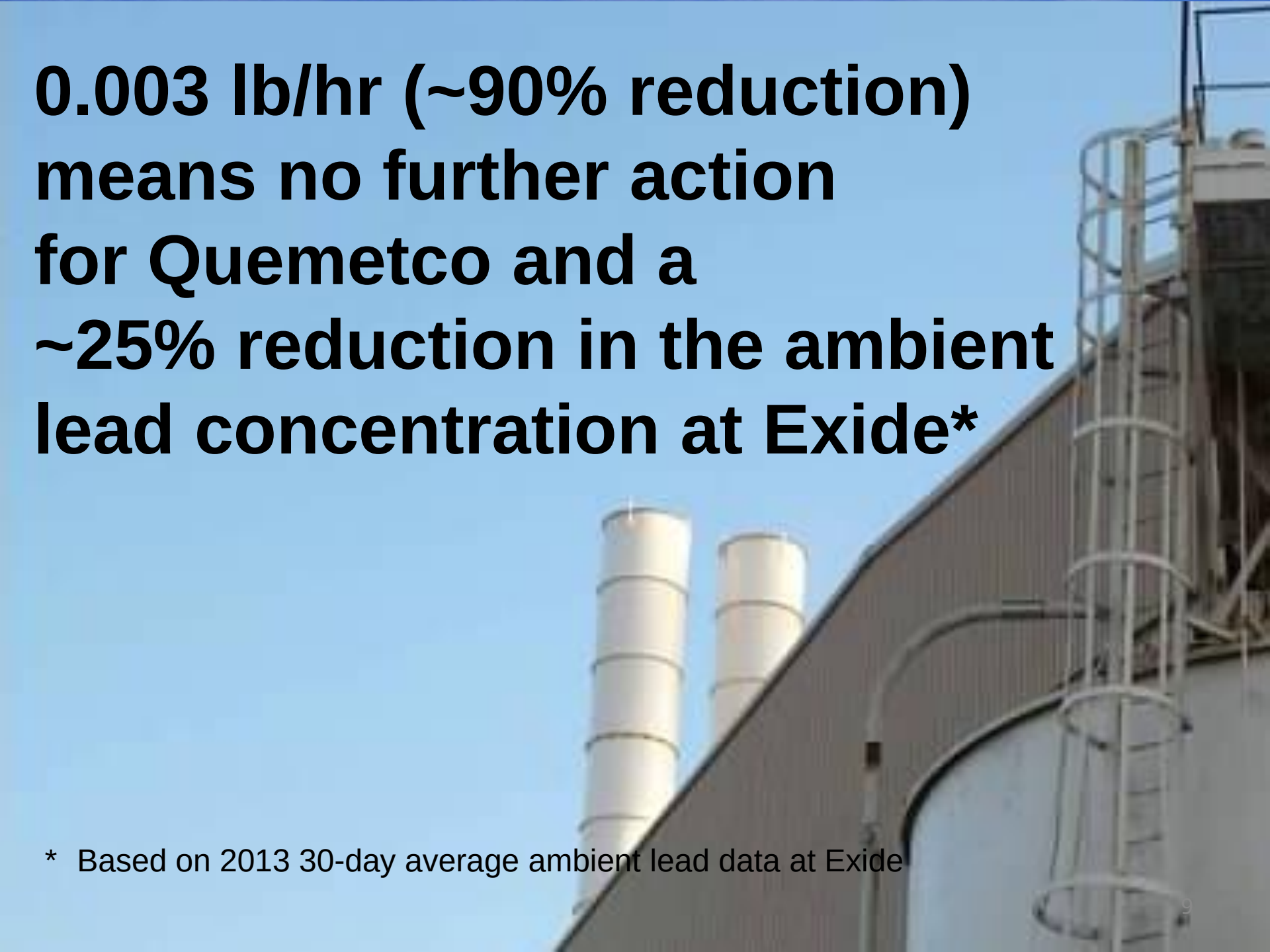
Lower ambient lead concentration to 0.110–0.100 µg/m^3

Lead Point Source Emission Rates



Lowering lead emission rate to 0.003 lb/hour will not reduce ambient lead concentration proportionately

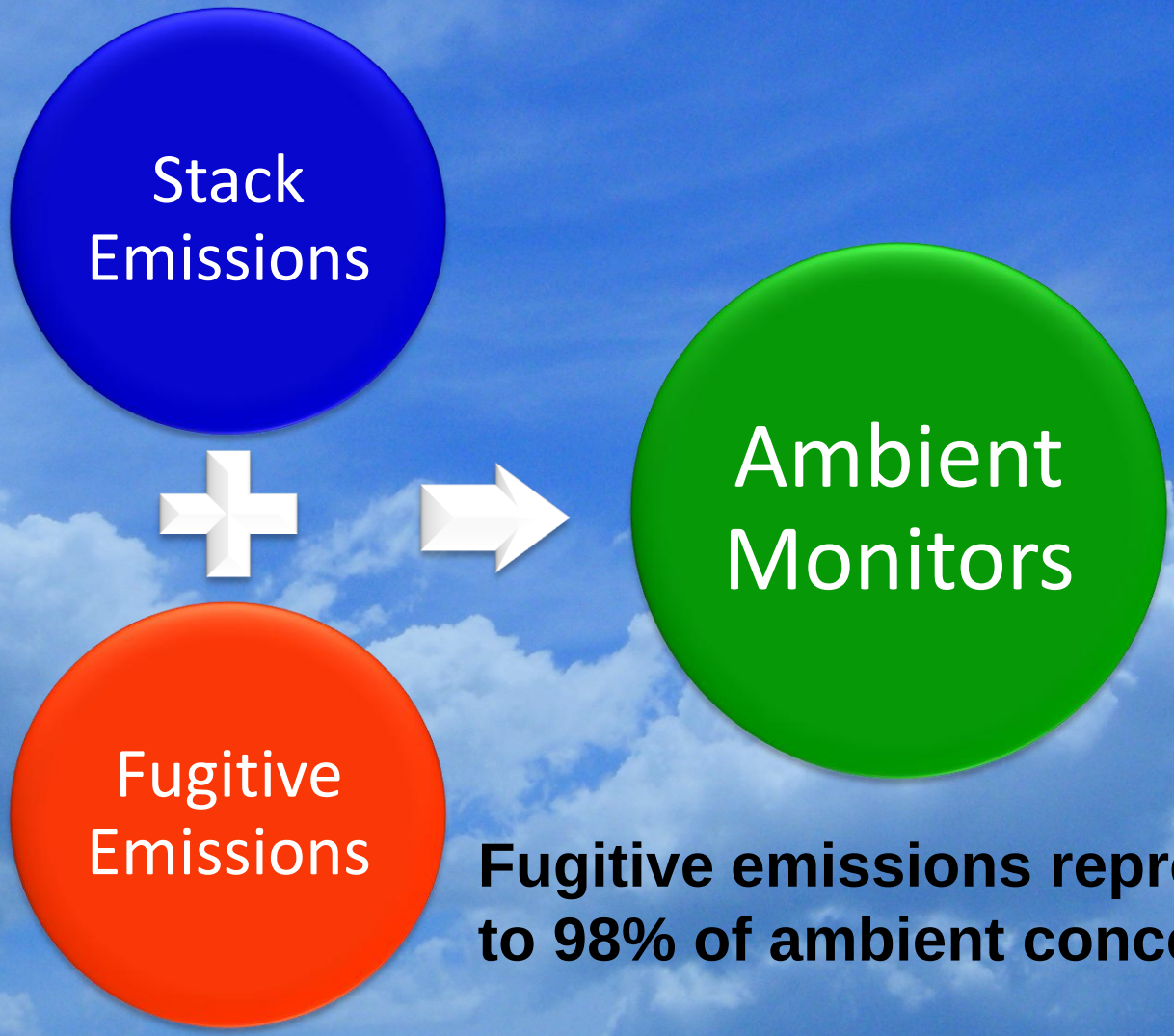




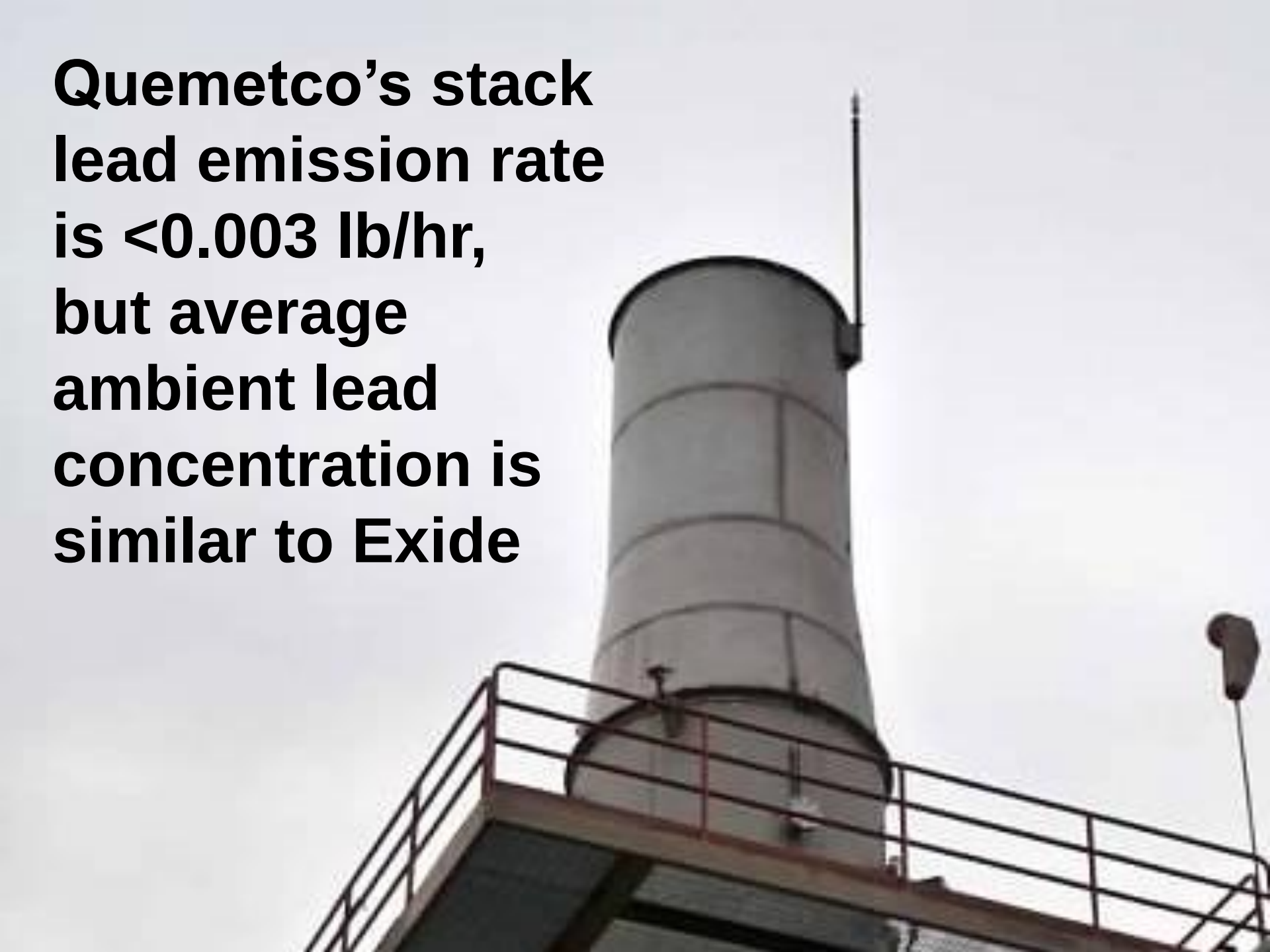
0.003 lb/hr (~90% reduction) means no further action for Quemetco and a ~25% reduction in the ambient lead concentration at Exide*

* Based on 2013 30-day average ambient lead data at Exide

Ambient Limits are Holistic Approach

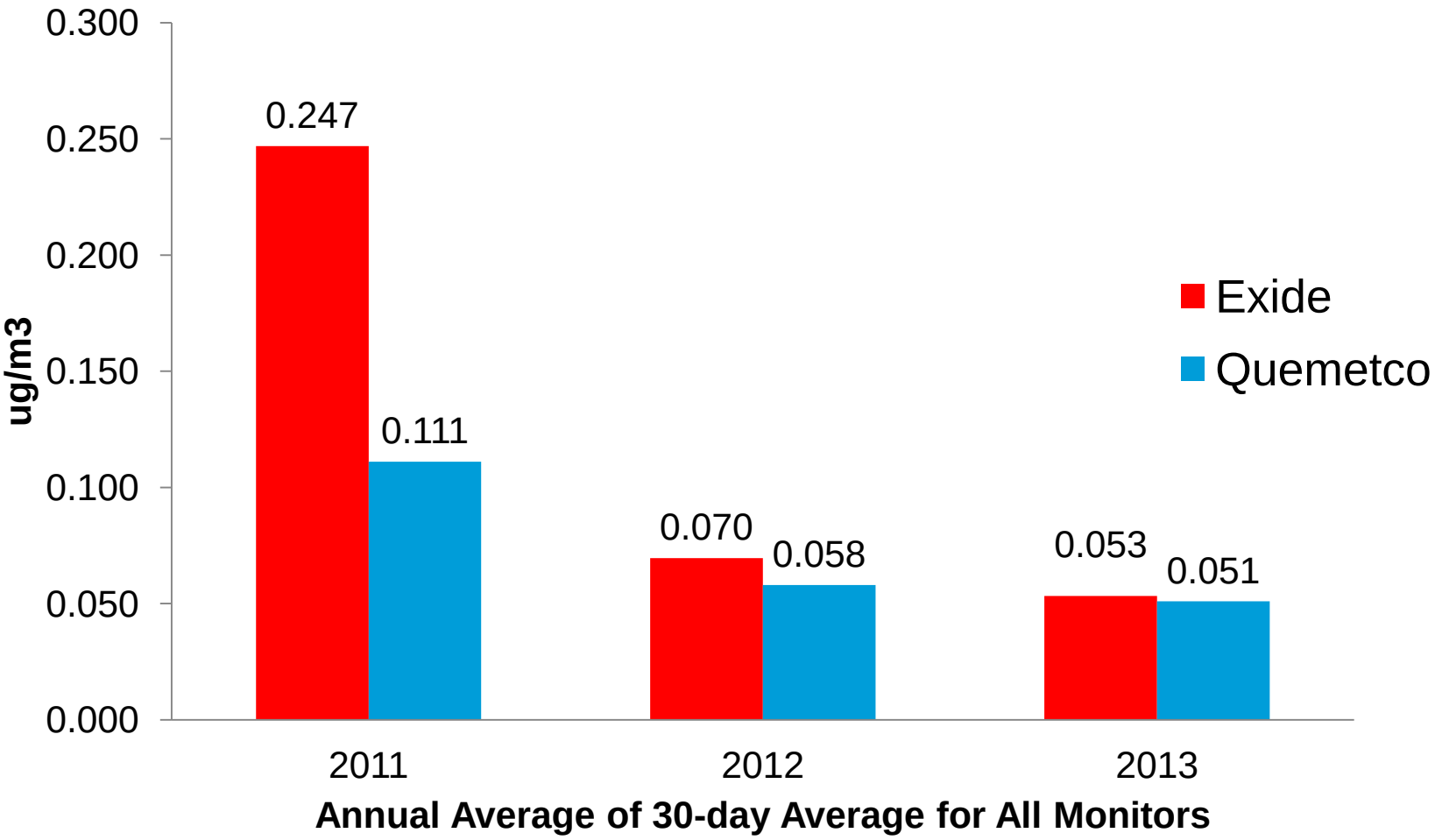


Fugitive emissions represent 35% to 98% of ambient concentration



Quemetco's stack lead emission rate is <0.003 lb/hr, but average ambient lead concentration is similar to Exide

Comparison of Ambient Lead Concentration Annual Average Over All Monitors



Staff Recommendation

- Proceed with rulemaking – Hearing March 2015
- Reduce stack emission limit 50% to 0.023 lb/hr
- Increase monitoring frequency to daily
- Decrease ambient lead concentration limit to:
  - January 2016: 0.110 µg/m^3
  - January 2017: 0.100 µg/m^3
- If lead emission rate of 0.003 lb/hr is included, hearing delayed 6 months